

IN THE CLAIMS

Please cancel claims 9 and 10 without prejudice.

1. (Original) A system for communicating an analog input signal as a modulated binary laser signal over a communication medium recovered as an output digital signal, the system comprising a sigma delta modulator for receiving the analog input signal and modulating the analog signal into a modulated symbol signal, a transmitter for converting the modulated symbol signal into the modulated binary laser signal, and for transmitting the modulated binary laser signal over the communication medium, a receiver for receiving and detecting the modulated binary laser signal for providing a received symbol signal, and a digital filter for filtering the symbol signal into the digital output signal.

2. (Original) The system of claim 1 wherein the transmitter comprises,

a symbol to binary converter for converting the modulated symbol signal from the sigma delta modulator into a converted digital signal, and

a pulse width modulator for modulating the laser signal by the converted digital signal into the modulated binary laser signal as a pulse width binary modulated laser signal communicated over the communication medium.

1 3. (Original) The system of claim 2 wherein the receiver
2 comprises,

3 a pulse width detector receiving the pulse width modulated
4 binary laser signal and for providing a detected binary signal, and
5 a binary to symbol converter for converting the detected binary
6 signal into the received symbol signal.

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9 4. (Original) The system of claim 3 wherein,

10 the pulse width detector is a pulse width quantizer detector,
11 the detected binary signal is a detected quantized signal,
12 the binary to symbol converter converts the detected quantized
13 signal into the received symbol signal.

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16 5. (Original) The system of claim 1 further comprising,

17 a timing recovery loop for generating a timing signal from the
18 receive symbol signal for clocking the digital filter.

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21 6. (Original) The system of claim 1 wherein,

22 the sigma delta modulator is a first order sigma delta
23 modulator.

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25 7. (Original) The system of claim 1 wherein,

26 the sigma delta modulator is a second order sigma delta
27 modulator.

1 8. (Original) The system of claim 1 wherein the communication
2 medium is a fiber optic.

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4 9. (Canceled) The transmitter of claim 1 wherein the pulse width
5 modulated laser signal is an on off shift keying signal.

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7 10. (Canceled) The transmitter of claim 1 wherein the modulated
8 signal is a phase shift keying signal.

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10 11. (Original) A system for communicating an analog input signal as
11 a pulse width modulated binary laser signal over a communication
12 medium recovered as an output digital signal, the system comprising
13 a sigma delta modulator for receiving the analog input signal
14 and modulating the analog signal into a modulated symbol signal,
15 a transmitter for converting the modulated symbol signal into
16 a converted digital signal for pulse width modulating a laser
17 signal into the pulse width modulated binary laser signal, and for
18 transmitting the pulse width modulated binary laser signal over the
19 communication medium,
20 a receiver for receiving and detecting the pulse width
21 modulated binary laser signal to provide a detected binary signal
22 and for converting the detected binary signal into a received
23 symbol signal, and
24 a digital filter for filtering the symbol signal into
25 the digital output signal.

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